

WHAT IS CLAIMED IS:

1. A computing system supporting network selection based upon network information spanning multiple communication media, the system comprising:

a rules data store for maintaining network selection criteria;

5 a media specific module interface facilitating acquiring network interface information potentially spanning multiple communication media associated with a set of networks to which the computing system is capable of connecting via a set of network interfaces; and

10 network selection logic for designating one of the set of networks by applying a network selection criterion from the rules data store to the accumulated network interface information potentially spanning multiple media.

2. The computing system of claim 1 wherein the media specific module interface and the network selection logic are associated with a rules engine having access
15 to the rules data store.

3. The computing system of claim 2 wherein the media specific module interface comprises a normalization module that receives requests from the rules engine directed to network interfaces.
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4. The computing system of claim 1 further comprising a set of media specific modules configured to acquire network interface information pertaining to network interfaces associated with particular media types.

25 5. The computing system of claim 4 wherein the media specific modules acquire network interface information from media specific drivers associated with particular network interfaces.

30 6. The computing system of claim 1 wherein the multiple communication media includes at least a wireless wide area network media and a wireless local area network media.

7. The computing system of claim 6 wherein the wireless local area network media includes one or more of the 802.11 wireless protocols.

5 8. The computing system of claim 1 wherein the network selection criterion specifies a preference order between at least two media based upon a network parameter associated with the media.

10 9. The computing system of claim 1 wherein the network selection criterion specifies a preference order between at least two media based upon a network type associated with the media.

15 10. The computing system of claim 1 wherein the network selection criterion specifies a preference order based upon a current location of the computing system.

11. The computing system of claim 1 wherein the network selection criterion specifies a preference order between logical networks.

20 12. The computing system of claim 1 wherein the network selection criterion specifies a preference order based upon a time parameter.

25 13. The computing system of claim 1 wherein the network selection logic is incorporated into a state machine that cyclically scans a set of network interfaces for networks, applies the network selection criterion to a set of networks and interfaces to render a current network and interface selection, and issues configuration instructions in accordance with the current network and interface selection.

30 14. The computing system of claim 1 further comprising a scanning engine associated with a network interface for controlling cyclical scanning based upon previous scan results maintained in a scanning history.

15. A method for selecting a network and interface combination, to which a computing system will initiate a connection via the network interface, based upon network information spanning multiple communication media, the method comprising:

accessing a network selection criterion;

5 accumulating network interface information potentially spanning multiple communication media associated with a set of networks to which the computing system is capable of connecting via a set of network interfaces; and

designating one of the set of networks and a network interface from the set of network interfaces by applying a network selection criterion to the network interface
10 information potentially spanning multiple media.

16. The method of claim 15 wherein the network selection criterion is accessed from a configurable rules data store.

15 17. The method of claim 15 further comprising issuing network interface configuration instructions in accordance with the designating step.

18. The method of claim 15 wherein the accumulating step is facilitated by a normalization module interposed between a set of media specific modules associated
20 with potentially multiple distinct types of communication media drivers and a rules engine that performs the designating step.

19. The method of claim 18 further comprising acquiring, by the media specific modules, network interface information from the communication media drivers
25 associated with particular network interfaces.

20. The method of claim 15 wherein the multiple communication media includes at least a wireless wide area network media and a wireless local area network media.

21. The method of claim 15 wherein the network selection criterion specifies a preference order between at least two media based upon a network parameter associated with the media.

5 22. The method of claim 15 wherein the network selection criterion specifies a preference order between at least two media based upon a network type associated with the media.

10 23. The method of claim 15 wherein the network selection criterion specifies a preference order based upon a current location of the computing system.

24. The method of claim 15 wherein the network selection criterion specifies a preference order between logical networks.

15 25. The method of claim 15 wherein the network selection criterion specifies a preference order based upon a time parameter.

20 26. The method of claim 15 wherein the network selection logic is incorporated into a state machine, and further comprising cyclically performing, under the control of the state machine:

scanning a set of network interfaces for networks;

applying the network selection criterion to a set of networks and interfaces to render a current network and interface selection; and

25 issuing configuration instructions in accordance with the current network and interface selection.

27. The method of claim 15 further comprising initiating network scanning for a designated one or more of the set of network interfaces based at least in part upon a scanning algorithm and previous scan results maintained in a scanning history.

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28. A computer-readable medium including computer-executable instructions for facilitating selecting a network and interface combination, to which a computing system will initiate a connection via the network interface, based upon network information spanning multiple communication media, the computer-executable instructions facilitating:

accessing a network selection criterion;

accumulating network interface information potentially spanning multiple communication media associated with a set of networks to which the computing system is capable of connecting via a set of network interfaces; and

designating one of the set of networks and a network interface from the set of network interfaces by applying a network selection criterion to the network interface information potentially spanning multiple media.

29. The computer-readable medium of claim 28 wherein the network selection criterion is accessed from a configurable rules data store.

30. The computer-readable medium of claim 28 wherein the computer-executable instructions further facilitate issuing network interface configuration instructions in accordance with the designating step.

31. The computer-readable medium of claim 28 wherein the accumulating step is facilitated by a normalization module interposed between a set of media specific modules associated with potentially multiple distinct types of communication media drivers and a rules engine that performs the designating step.

32. The computer-readable medium of claim 31 further comprising computer-executable instructions for acquiring, by the media specific modules, network interface information from the communication media drivers associated with particular network interfaces.

33. The computer-readable medium of claim 28 wherein the multiple communication media includes at least a wireless wide area network media and a wireless local area network media.

5 34. The computer-readable medium of claim 28 wherein the network selection criterion specifies a preference order between at least two media based upon a network parameter associated with the media.

10 35. The computer-readable medium of claim 28 wherein the network selection criterion specifies a preference order between at least two media based upon a network type associated with the media.

15 36. The computer-readable medium of claim 28 wherein the network selection criterion specifies a preference order based upon a current location of the computing system.

 37. The computer-readable medium of claim 28 wherein the network selection criterion specifies a preference order between logical networks.

20 38. The computer-readable medium of claim 28 wherein the network selection criterion specifies a preference order based upon a time parameter.

25 39. The computer-readable medium of claim 28 wherein the network selection logic is incorporated into a state machine, and further comprising computer-executable instructions for cyclically performing, under the control of the state machine:

 scanning a set of network interfaces for networks; ,

 applying the network selection criterion to a set of networks and interfaces to render a current network and interface selection; and

30 issuing configuration instructions in accordance with the current network and interface selection.

40. The computer-readable medium of claim 28 further comprising computer-executable instructions for initiating network scanning for a designated one or more of the set of network interfaces based at least in part upon a scanning algorithm and previous scan results maintained in a scanning history.